



April 13, 2026

Dr. Cem Hatipoglu
Associate Administrator, Vehicle Safety Research
U.S. Department of Transportation,
1200 New Jersey Avenue SE
Washington, DC 20590

RE: Agency Information Collection Activities; Notice and Request for Comment; Drive-Mode Design Best Practices [Docket No. NHTSA-2025-0128]

Dear Dr. Hatipoglu,

The Alliance for Automotive Innovation (Auto Innovators) appreciates the opportunity to provide comments in response to the National Highway Traffic Safety Administration's (NHTSA) notice and request for comments on a request for OMB approval of a new information collection to examine how different drive-mode implementation affects driver attention and performance compared to standard interfaces.^{1,2}

Auto Innovators supports NHTSA research to evaluate driver inattention. According to the agency, distracted driving claimed more than 3,000 lives on our roadways in 2023.³ However, as noted in a separate NHTSA report on the societal impact of motor vehicle crashes, this number is likely to be underreported due to the challenges in the collection of distracted driving data.⁴ More specifically, it is often difficult during crash investigations to determine whether drivers were engaged in non-driving tasks like talking, texting or using apps on a phone, eating or drinking, or using in-vehicle systems.

Driver distraction and inattention are not new issues. However, they remain an evolving challenge. How people interact with technology in their everyday lives is changing, not just in the car. People are more connected than ever and there are increasing demands on their attention – whether it is related to work, social media, or connecting with friends and family. And with the increased proliferation of mobile devices, demands on their attention are present 24/7. Despite these challenges, technology also plays an important role in managing drivers' attention so that they can remain focused on the driving task. This includes technology to help minimize potential sources of distraction and the development of driver support features that help refocus drivers on the driving task. The automotive industry has been proactive in each of these areas.

¹ Auto Innovators represents the full auto industry, including the manufacturers producing most vehicles sold in the U.S., equipment suppliers, battery producers, semiconductor makers, technology companies, and autonomous vehicle developers. Our mission is to work with policymakers to realize a cleaner, safer, and smarter transportation future and to ensure a healthy and competitive auto industry that supports U.S. economic and national security. Representing over 5 percent of the country's GDP, responsible for supporting nearly 11 million jobs, and driving \$1.5 trillion in annual economic activity, the automotive industry is the nation's largest manufacturing sector.

² 91 FR 6284

³ National Center for Statistics and Analysis. (2025, April). Distracted driving in 2023 (Research Note. Report No. DOT HS 813 703). National Highway Traffic Safety Administration.

⁴ National Highway Traffic Safety Administration. (2023). The economic and societal impact of motor vehicle crashes, 2019 (revised) (Report No. DOT HS 813 403). U.S. Department of Transportation. p. 131.

In 2006, the automotive industry published comprehensive voluntary guidelines – also known as the human machine interface (HMI) guidelines or industry guidelines – to help inform the design of in-vehicle systems to ensure they do not impair the driver’s ability to perform the driving task.⁵ These guidelines include criteria around the location, functionality and available applications, interface design and controls, and system behavior, including limiting content not intended for use while driving, and provide a foundation for how modern vehicle interfaces are designed today.

Since these guidelines were first established, there have been significant changes in how consumers interact with technology. However, the fundamental principles of the original guidelines still apply even advances in touchscreen technology, ergonomic button designs, and voice-based interfaces create new opportunities for innovation. In other words, the guidelines’ technology-neutral approach has enabled automakers to develop and integrate new third-party applications that provide drivers with access to information in a manner that is more consistent with the driving environment. However, there are limitations in terms of how much control manufacturers have over portable devices connected to the vehicle beyond the information that is displayed through the instrument cluster. Advances in occupant-compartment sensor technology also create new opportunities to assist drivers by issuing alerts or managing interactions with the in-vehicle system when inattention is detected.

From a portable device perspective, drive-mode applications that simplify the user experience are also becoming more readily available, but they are not widespread and may rely on a phone operating system or integration with vehicle-based platforms. Even when drive-mode is available, there are differences in how user interfaces are designed and implemented, which can often depend upon the type of application, the type of information made available to the user, and its relevance to the driving task.

Auto Innovators supports NHTSA research to better understand driver engagement with these features, and we provide the following comments and recommendations to help enhance the quality, utility and clarity of the information to be collected.

NHTSA should provide more information about the drive-mode applications being evaluated.

The stated purpose of this research study is to examine how different drive-mode implementations affect driver attention and performance compared to standard interfaces. However, the information collection request (ICR) does not clearly specify the types of tasks to be evaluated, or which driver performance metrics are most relevant to the study.

We request that NHTSA develop a high-level test matrix that summarizes the drive-mode and non-drive-mode applications that will be tested. This will help ensure more informed public comments on the utility of the data. NHTSA should also provide additional details on the planned driving conditions for the test track scenarios, as these conditions will influence how drivers engage in secondary tasks. For example, when a driver performs secondary task at low speed on a straight road without any potential hazards, they the frequency and duration of glances away from the forward roadway may differ when compared to driving under more complex conditions. For reference, the industry guidelines reference lateral position control and car following headway as a potential means to assess dynamic driver responses during secondary task execution. These could ensure a more realistic test setup for evaluating drive-mode applications while driving, and we encourage NHTSA to consider this as an alternative.

⁵ *Statement of Principles, Criteria and Verification Procedures on Driver Interactions with Advanced In-Vehicle Information and Communication Systems, Driver Focus-Telematics Working Group, June 26, 2006*

We also seek clarification on the purpose of the static test track evaluation using occlusion glasses, as it is unclear whether this test is intended to establish baseline data for comparison with dynamic testing, support driver training, or assess the suitability of occlusion testing for evaluating drive-mode task performance. Although the occlusion method aligns with the agency's driver distraction guidelines, we suggest NHTSA consider the use of other methods for evaluating the frequency and duration of glances (e.g. camera-based eye tracking). In the absence of established baseline data, it may be difficult for the agency to compare differences in task performance under various conditions as there are multiple confounding factors that could impact the study findings – particularly during dynamic testing.

NHTSA should develop a post-study-drive questionnaire to identify the factors that influence user acceptance and use of drive-mode applications.

NHTSA has indicated that it plans to use this research to determine how drive-mode interfaces comply with the recommendations in the NHTSA Driver Distraction Guidelines and to identify factors that influence user acceptance of drive-mode.⁶ However, it is not clear how the agency intends to evaluate user acceptance based on the information provided in the ICR. To address this issue, NHTSA may need to consider (or provide additional information on) the need for a post-test-drive questionnaire to understand whether the driver's responses during testing are representative of their real-world driving behavior. This questionnaire should also explore the extent to which the instructions provided during the test run reflected how the driver would otherwise respond under real world driving conditions. In other words, would they self-regulate their behavior based on driving conditions, or do the guidelines themselves create challenges that result in an increased likelihood of drivers seeking to disable drive-mode, even though glance times may be reduced?

A post-test questionnaire would also help identify the circumstances whereby a person may seek to turn off drive-mode features (or simply not turn them on) based on their initial experience. It may also be helpful to understand whether the prescribed manner in which the driver completed the assigned tasks is representative of their anticipated real-world naturalistic driving behavior, or if test participant would use another method for completing a given task (e.g., using voice-based commands).

NHTSA should conduct additional analysis to identify and address potential sample size concerns.

The sample size for both the test track and cone course driving scenarios may be insufficient to detect medium-sized effects, and this may impact the overall utility of the data. We recommend NHTSA conduct an *a priori* power analysis based on comparable studies. It is also crucial that the agency accounts for cumulative alpha error inflation resulting from multiple comparisons. We recommend specifying appropriate correction methods (e.g., Bonferroni or false discovery rate [FDR]) in the analysis plan.

NHTSA should reconsider the proposed cones course scenario to increase the sample size.

We request that NHTSA provide more information on its rationale for including cone course testing as part of this study. We have concerns that this approach may not accurately reflect real-world driving conditions or result in naturalistic driving behaviors observed under more realistic driving scenarios. More information should also be provided on whether drivers will be instructed to prioritize maintaining a set speed through the course, avoid cones, or complete assigned tasks, as each of these could unduly influence how drivers respond during the test scenario. We recommend that NHTSA reconsider cone course testing and instead expand the test track evaluations to increase overall sample size.

⁶ <https://www.federalregister.gov/d/2026-02657/p-32>

NHTSA should continue to engage with stakeholders as it considers the potential development of future guidelines

The agency has indicated that the study results will provide NHTSA with valuable information to support the potential development of evidence-based best practices for the design of future drive-mode applications, as well as the functionality of mobile phones operating independently of in-vehicle systems.⁷ While we anticipate the agency's research will add to the body of research on how drivers interact with drive-mode applications, we caution against NHTSA following its previous model of developing best practices that focus on discrete aspects of driver distraction and inattention (i.e., similar to the phased approach). This no longer fully reflects how drivers interact with technology, and NHTSA should carefully consider the extent to which this research, and any corresponding best practices will remain relevant over time.

A flexible, dynamic, and technology neutral approach is needed, and it is important that any potential best practices or guidelines do not unintentionally limit future innovation. We encourage NHTSA to continue its efforts to convene stakeholders to discuss recent technology innovations, and to identify whether potential industry-led approaches can provide policymakers with the necessary safety assurances that driver distraction and inattention are being addressed.

Thank you for your consideration of these comments. Please contact me if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'SP' followed by a horizontal line.

Sarah Puro
Vice President, Safety and Technology Policy
Alliance for Automotive Innovation

⁷ <https://www.federalregister.gov/d/2026-02657/p-32>